[CLAIMS]

1. A web material for combinatorial experimentation comprising a substrate in web form and multiple microwells, arranged on said substrate in a predetermined pattern and separated from each other by separating zones, each microwell comprising a bottom and an upstanding surface formed by the adjacent separating zones, wherein the composition of said bottoms on the one hand and the composition of said separating zones and upstanding surfaces on the other hand show a different hydrophilicity.

2. A web material according to claim 1 wherein said upstanding surface extends at most 500 µm above the bottom of said microwells.

3. A web material according to claim 1 wherein said bottoms of said microwells have undergone a surface treatment to improve the dynamics of fluid spreading.

4. A web material according to claim 1 wherein the total amount of microwells present on said web material is larger than 1000.

5. A web material according to claim 1 wherein the ratio of the total length (L) of said web to its width (W) is greater than 20.

6. A web material according to claim 1 wherein said microwells have an internal volume smaller than 10 µl.

7. A web material according to claim 1 wherein a plurality of markers is present on said web material in the web direction.

8. A web material according to claim 7 wherein said marker is a barcode present at the edge of the substrate.

9. A web material according to claim 1 wherein an identifier is present at the start and/or the end of the web.

10. A web material according to claim 1 wherein said substrate is a flexible polymeric material.

11. A web material according to claim 10 wherein said flexible polymeric material is chosen from polyesters and polyimides.

12. A web material according to claim 1 wherein said substrate is a flexible metal or metal oxide.

13. A web material according to claim 12 wherein said substrate is an aluminium foil having a top layer of aluminium oxide applied by electrochemical oxidation.

14. A web material according to claim 1 wherein said substrate is flexible glass.

15. A web material according to claim 1 wherein both sides carry microwells as defined in the previous claims.

16. A method for manufacturing a web material having microwells for combinatorial experimentation as defined in claim 1, said method comprising the steps of, in order :
- providing a substrate in web form with a homogeneous hydrophilic surface covered with a heat or light sensitive hydrophobic layer having a particular degree of solubility in a developer,
- exposing pattern-wise said hydrophobic layer with heat or light to pattern-wise change said solubility to more or less soluble in said developer, and
- pattern-wise removing by said developer the soluble parts of said exposed hydrophobic heat or light sensitive layer, thereby forming a pattern of multiple microwells with hydrophilic bottoms and hydrophobic upstanding surfaces separated from each other by hydrophobic separating zones.

17. A method for manufacturing a web material according to claim 16 wherein the solubility in the developer of the pattern-wise exposed parts is increased so that these exposed parts are

removed by the developer and the non-exposed parts are retained (positive working mode).

18. A method for manufacturing a web material according to claim 16 wherein the solubility in the developer of the pattern-wise exposed parts is decreased so that the non-exposed parts are removed by the developer and the exposed parts are retained (negative working mode).

19. A method for manufacturing a web material having microwells for combinatorial experimentation as defined in claim 1, said method comprising the steps of, in order :
- providing a substrate in web form with a hydrophilic surface,
- pattern-wise applying hydrophobic areas on said substrate, thereby forming a pattern of multiple microwells with hydrophilic bottoms and hydrophobic upstanding surfaces separated from each other by hydrophobic separating zones.

20. A method according to claim 19 wherein said areas are applied by non-impact printing.

21. A method for manufacturing a web material having microwells for combinatorial experimentation as defined in claim 1, said method comprising the steps of, in order,:
- providing a substrate in web form with a hydrophobic surface covered with a hydrophilic layer,
- pattern-wise ablating by heat parts of said hydrophilic layer, thereby forming a pattern of multiple microwells with hydrophobic bottoms and hydrophilic upstanding surfaces separated from each other by hydrophilic separating zones.

22. An apparatus for rapid screening of substances for useful applications comprising :
- a holder, comprising an unwinding roll, for a web material having microwells for combinatorial experimentation as defined in claim 1,
- an application zone suited for applying at least one substance in at least one of said microwells present in said application

zone,
- a screening zone for determining a useful property of said substance in said screening zone,
- a mechanism to transport said web material from said holder to said application zone and said screening zone, and
- optionally a rewinding section

23. A method of rapid screening of substances for useful properties comprising the steps of, in order, :
- unrolling a web material as defined in claim 1 from an unwinding roll present in the holder of an apparatus according to claim 22,
- passing said web material through the application zone of said apparatus to apply at least one substance in at least one of said microwells present in said application zone,
- passing said web material through the screening zone of said apparatus for determining a useful property of said at least one substance,
- optionally rewinding said web material.